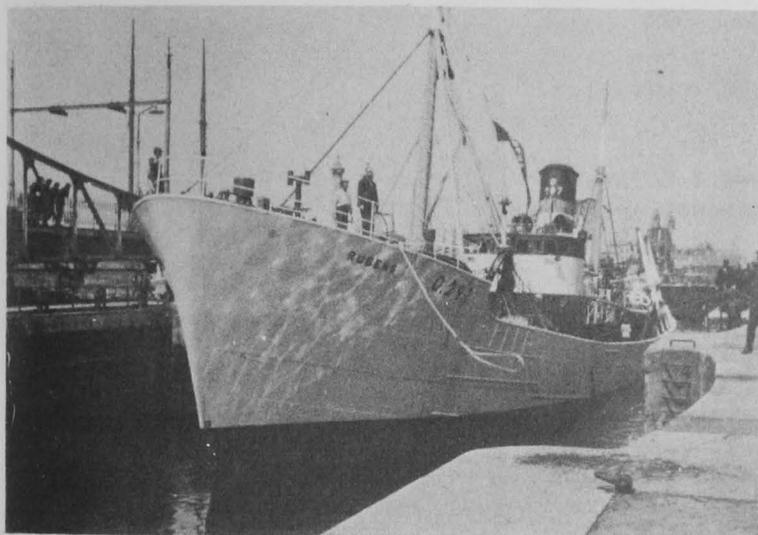




Belgium



BELGIAN TRAWLER READY TO LEAVE FOR THE FISHING GROUNDS.

REVIEW OF THE FISHERIES, 1949: Production: The Belgian fish catch in 1949 totaled 61,349 metric tons, slightly below the 1948 total, but still about 55 percent above 1938, according to American Embassy reports dated December 28, 1949, and March 2, 1950, from Brussels. The value of the 1949 catch—465 million francs (\$10.6 million at predevaluation rate of exchange)—was practically the same as for the previous year.

Type of Fish: The Belgian fish catch in 1949 included 9,300 metric tons of cod, 3,763 tons of plaice,

4,500 tons of ray, 3,000 tons of haddock, 874 tons of turbot, 3,200 tons of sole, and 16,800 tons of herring. As compared with 1948, there was an increase in the catch of cod, ray, turbot, and sole; there was little change in the catch of haddock; but the herring and plaice production declined.

Table 1 - Belgian Production of Fishery Products, 1948-49 and 1936-38 Average

Year	TOTAL			PRINCIPAL SPECIES						
	Quantity	Value ^{1/}		Cod	Plaice	Ray	Haddock	Turbot	Sole	Herring
	Metric Ton	Francs	U.S.\$	(In Metric Tons)						
1949	61,349	464,572,880	10,587,476	9,299	3,797	4,516	2,947	874	3,200	16,811
1948	64,440	462,049,896	10,627,148	7,464	4,572	3,672	2,988	744	1,776	22,380
1936-38										
Average	39,468	120,678,000	4,078,916	4,152	3,060	3,444	1,308	744	2,268	5,880

^{1/} Values converted on the basis of: 1936-38, 1 Belgian franc equals 3.38 cents U.S.; 1948-49, 1 Belgian franc equals 2.3 cents U.S.

Table 2 - Belgian Trawler Fishing Fleet. (Type, Horsepower, Number and Tonnage), 1948-49, and 1938

Type	Horsepower	Number of Vessels			Tonnage (Metric Tons)		
		1949	1948	1938	1949	1948	1938
I	7-75	187	201	236	3,046	3,186	3,998
II	80-115	81	80	85	2,629	2,606	3,408
III	120-230	115	112	123	8,146	7,929	9,241
IV	240-499	51	53	44	6,243	7,648	5,355
V-a	Motor 500	8	3	6	1,643	749	1,439
V-b	Steam 480-825	19	19	16	8,321	8,321	4,606
	Total	461	473	510	30,028	30,439	28,037
	Total Horsepower	-	-	-	65,743	65,997	59,572

Table 3 - Belgian Consumption of Fishery Products (Round and Dressed Weight) 1948-49 and 1938

Item	1949	1948	1938
	.. (In Metric Tons) ..		
Production	61,349	64,440	39,468
Net Imports	40,686	53,436	50,496
Apparent Disappearance or Consumption	102,035	117,876	89,964

Fishing Fleet: During, 1949, the Belgian fishing fleet declined by three units to a total of 470 vessels. There was also a slight drop in tonnage and horsepower, according to preliminary figures. Although there are fewer vessels in the Belgian fishing fleet now than there were before the war, the tonnage and horsepower are larger than prewar.

Consumption: In 1949 the Belgian fish consumption was 102,000 metric tons (no adjustments made to a common basis of canned, smoked, fresh fish). The 1949 apparent consumption was about 13 percent less than in 1948, but was about 13 percent above 1938.

As the cost of catching fish is too great to permit fishing exclusively for manufacture of fish meal, practically all of the Belgian fish catch is destined for human consumption.

Fish Meal: Although the Belgian fishing fleet does not catch fish for manufacturing purposes, occasionally, particularly during the summer months, some fish is diverted to fish meal, because of the low prices offered at the Ostend fish market. The amount of fish so diverted to fish meal is less than 1,000 tons annually (in 1947 the amount was 404 metric tons, and in 1948 the total was 961 tons).



HAULING THE TRAWL NET CLOSE TO THE SIDE OF A BELGIAN TRAWLER.

Table 4 - Belgian Foreign Trade in Fishery Products, 1948-49 and 1938

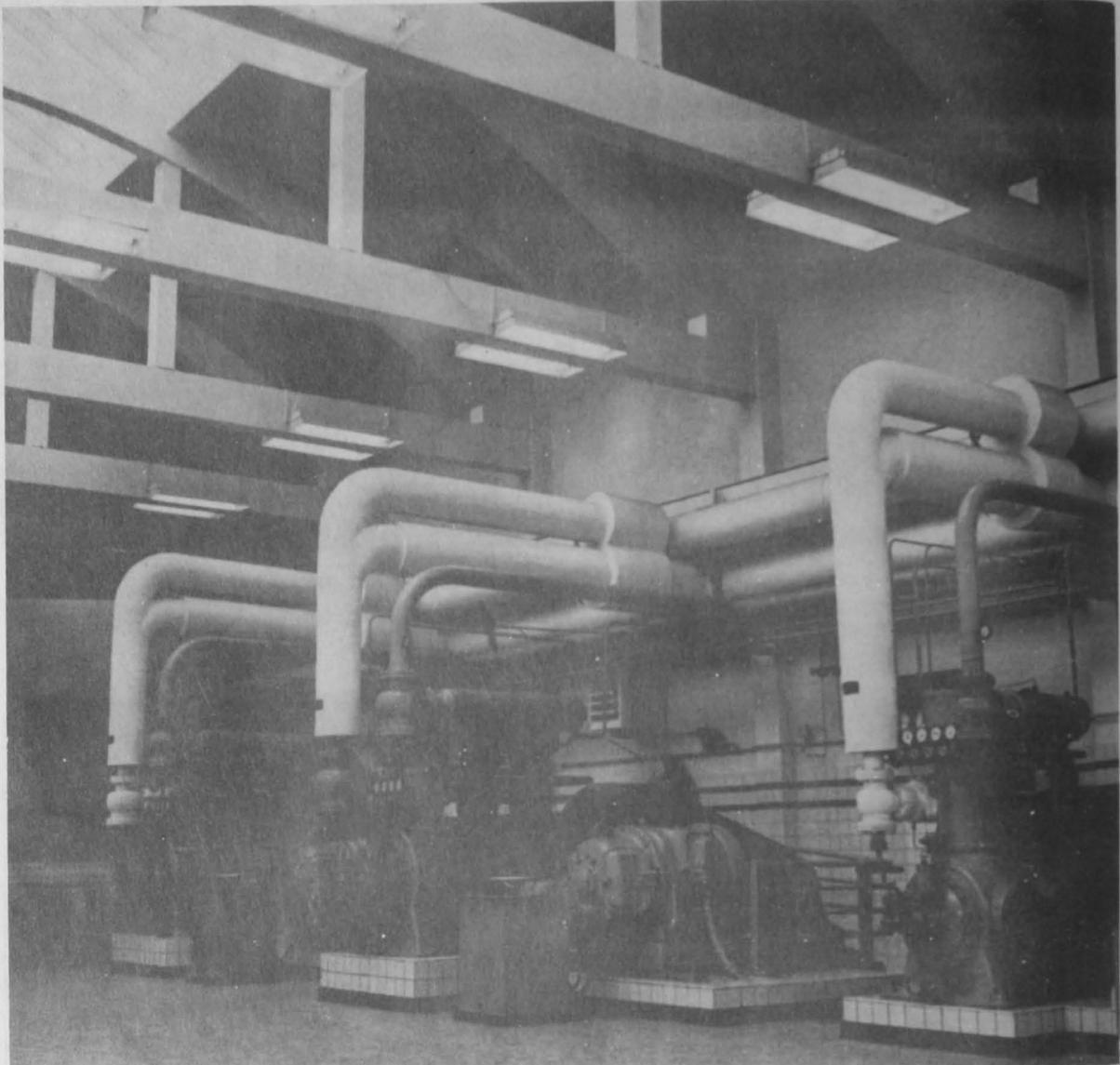
Year	I M P O R T S					E X P O R T S				
	F i s h			Shellfish	Total Fishery Products	F i s h			Shellfish	Total Fishery Products
	Fresh	Salted & Smoked	Canned	Oysters, Mussels, etc.		Fresh	Salted & Smoked	Canned	Oysters, Mussels, etc.	
 (In Metric Tons) (In Metric Tons)				
1949	8,818	10,036	11,991	21,751	52,596	10,359	775	768	8	11,910
1948	13,116	11,220	15,624	21,708	61,668	6,384	1,428	420	-	8,232
1938	13,056	13,164	14,784	20,484	61,488	5,256	1,596	1,380	2,760	10,992



A MODERN BELGIAN FISH PLANT AT OSTEND. NOTE CONVEYOR SYSTEM ON THE LEFT.



WEIGHING AND WRAPPING FILLETS IN THE FISH PLANT AT OSTEND. ALL PHOTOGRAPHS COURTESY OF LES FRIGORIFERES DU LITTORAL, S.A., BRUSSELS.



THREE OF THE SEVEN VERTICAL REFRIGERATION COMPRESSORS IN THE MODERN FISH PLANT AT OSTEND.

Imports: During 1949 net imports totaled 40,686 metric tons, about 20 percent less than in 1948 or in 1938. Whereas previously Belgium had been on a net import basis for fresh fish (7,000 to 8,000 tons annually), in 1949 Belgium changed to a net export basis, the total net exports of fresh fish during 1949 totalling

Table 5 - Belgian Imports of Canned Fish by Type and Country of Origin, 1949									
Type of Canned Fish	United States	Canada	Portugal	France	French Morocco	Norway	Netherlands	Others	Total
	(In Metric Tons)								
Sardines	2	-	3,263	78	1,129	-	-	150	4,622
Pilchards	1,925	11	-	-	-	1	-	3	1,940
Salmon	794	3,775	-	-	-	-	-	14	4,583
Other	52	-	449	-	-	181	46	118	846
Total ..	2,773	3,786	3,712	78	1,129	182	46	285	11,991

Table 6 - Belgian Exports of Canned Fish by Type, 1949

Sardines	Pilchards	Salmon	Other	Total
..... (In Metric Tons)				
1/170	6	2/88	3/504	768
1/Of this amount, 87 metric tons went to Bizone Germany.				
2/Of this amount, 44 metric tons went to Italy.				
3/Of this amount, 134 metric tons went to Bizone Germany, 102 tons to Italy, and 86 tons to Belgian Congo.				

1,541 metric tons. Net imports of oysters and mussels showed little change from previous periods, but there was some decline in net imports of canned fish, and in salted and smoked fish.

Prices: Since the beginning of 1949, there has been some decline in the prices received by Belgian fishermen on their fish catch.

Retail prices on canned sardines and canned salmon, on the other hand, have been rising.



Chile

GERMAN TRAWLERS TO FISH OFF THE CHILEAN COAST: Two of Germany's oldest trawlers will soon proceed to Chile to engage in the fishery off the Chilean coast, according to a March 2 American consular report from Bremerhaven. The two vessels are the Flensburg (279 gross registered metric tons) with a capacity of approximately 264,000 pounds, built in 1922; and the Neumuehlen (262 gross registered metric tons), capacity of 198,000 pounds, built in 1914. The trawlers will be manned by German crews.

These steam trawlers are considered too small for economic operation in the present German fisheries.

* * * * *

NEW CHILEAN FISH MEAL PLANT IN OPERATION: A Chilean fish meal plant started operations early this year in San Antonio, Chile, according to a letter received by the Service from a fishing company in Chile. The equipment was imported from the United States last year.

The new plant has a capacity of 10 tons per hour. Raw material is supplied at present by three trawlers (one Belgian and two Chilean vessels), and the company expects to increase the number of vessels to 6 or 8. Of the new vessels to be added to the company's fleet, 2 or 3 will probably come from Europe and the balance will be built in San Antonio. The production of the plant is intended principally for export.

Table 7 - Belgian Average Fish Prices (Landed Value - Monthly Average for Jan., July, Oct.-Dec. 1949 and Average for 1948 and 1938)

Species	1 9 4 9					1948	1938
	Jan.	July	Oct.	Nov.	Dec.		
..... (In U.S. cents per pound)							
Cod	13.6	6.8	11.9	12.8	11.2	10.4	4.5
Plaice	13.1	5.8	5.6	6.8	7.2	9.4	4.6
Ray	7.9	4.5	3.5	5.8	6.2	6.3	3.6
Haddock	12.4	3.0	7.4	8.6	7.2	7.0	4.5
Turbot	33.1	23.0	18.6	17.5	21.1	28.1	15.2
Sole	43.3	47.3	21.3	14.3	19.2	42.3	20.5
Herring	1.8	2.7	3.3	3.8	2.9	3.0	1.3

Note: Following rates of exchange were used to convert from Belgian francs to U. S. cents:
 1938 - 1 Belgian franc equals 3.38 U.S. cents;
 1948 - 1 franc equals 2.3 U.S. cents; Jan. thru Sept. 1949 - 1 franc equals 2.3 U.S. cents;
 Oct. thru Dec. 1949 - 1 franc equals 2.0 U.S. cents.

Ecuador

AMERICAN FISH CANNERY PURCHASED FOR SHIPMENT TO ECUADOR: A firm which six months ago signed a contract with the Government of Ecuador for establishment of a fish cannery on the Ecuadoran coast has purchased the complete installations of a canning corporation in Oregon, Ecuador's President Galo Plaza announced on March 1, according to an American consular report from Quito. The fish-canning installation, which will be promptly shipped to Ecuador, is reported to have a production capacity of 1,500-2,000 cases per 8-hour day and refrigerated storage facilities for 8,000 metric tons of fish.

In his statement, the President also referred to the fish-canning project of Westinghouse Electric International, but there is no indication that substantial progress in realization of this project has been made since the signing of a contract in April 1949.

STATUS OF THE FISHERIES, 1949: Fishing remained an essentially potential industry in Ecuador throughout 1949, a March 3 consular dispatch reports. Schemes by foreign enterprises to establish fish canning and refrigeration plants in Ecuador produced no tangible results, although the Government signed three contracts of industrial protection for the building of factories for fish packing and the utilization of fishery byproducts.

Several American fishing firms operate in Ecuadoran coastal waters and in the Galapagos, and there was an increase in the number of boats operating in 1949. A large amount of fish is taken out of Ecuadoran waters without any benefit to the national economy. Inadequate patrolling by Ecuadoran authorities prevents effective control of the industry.

Cold Storage Plant: One Ecuadoran firm is completing the installation of a modern refrigeration plant in the Galapagos Islands. This plant is expected to be in operation in April 1950, with a handling capacity of 100 metric tons of fish per day and total storage space for 600 tons.

Construction of Fishing Vessels: The same Ecuadoran firm expects to finish construction of ten fishing boats of ten tons each by March 1950. The fish, which will be sold to American canneries, will be picked up at the cold storage plant in the Galapagos.

Cannery Planned: The most promising development in 1949 was the signing of an agreement with a San Diego, California, cannery firm, which has been carrying on fishing operations in Ecuadoran waters for several years. This firm expressed an interest in establishing a fish cannery in Manta in 1950.

Fish Meal Plant Planned: An agreement was signed on April 11, 1949, with the Ecuatoriano-Americano Cannery and Fishmeal Plant, providing for the establishment of a fish meal plant on the Ecuadoran coast between Manta and Salinas with \$1,500,000 to be obtained from the Export-Import Bank, \$200,000 Ecuadoran capital, and \$700,000 private United States capital. There has been no indication as yet that the desired capital has been forthcoming for this project.



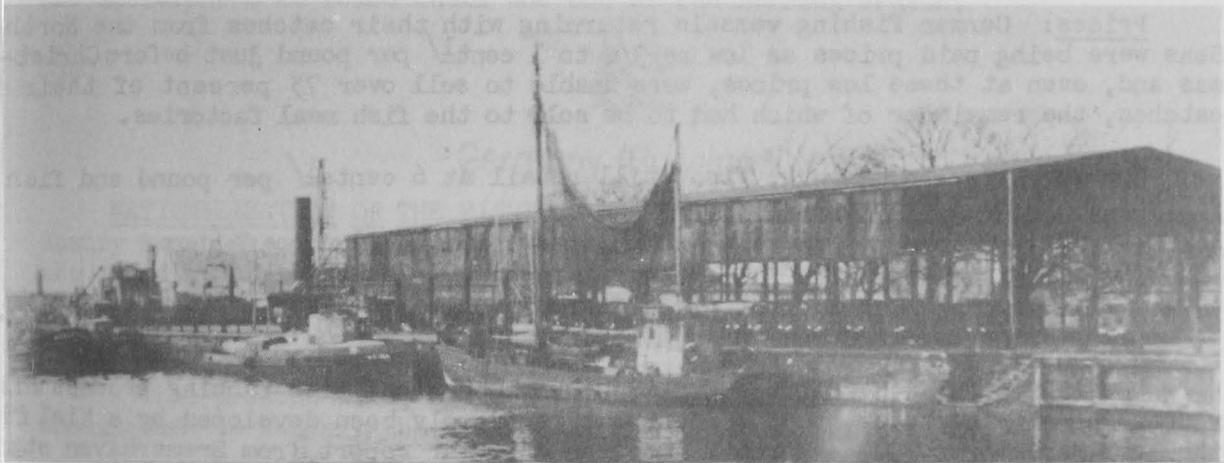
German Federal Republic

PRELIMINARY FISHERIES REVIEW, 1949: Production: The favorable trend in German deep-sea fishing continued in 1949, aided by the addition of several new

trawlers to the fishing fleet, a February 3 American consular dispatch from Hamburg reports. A total of 465,000 metric tons of fish were landed in 1949—85,000 metric tons more than in 1948. Most of the landings were made at Bremerhaven, Cuxhaven, Hamburg-Altona, and Kiel. The 1949 herring season was an especially favorable one, showing landings of 168,000 metric tons. This is the first increase shown over prewar herring landings which, in 1937, amounted to 164,000 metric tons. During January

1950, reports indicate that herring fishers have suddenly encountered large schools of herring all the way from the North Sea to the banks off Iceland.

Type of Vessel	Metric Tons
Trawlers	339,000
Cutters	86,000
Luggers	40,000
Total	465,000



GERMAN COASTAL CUTTER (OLD TYPE) AT BREMERHAVEN, SHOWING NETS HUNG UP TO DRY.

A decrease in fish imports during 1949 was also gratifying. Imports dropped from 286,784 metric tons in 1948 to 276,000 metric tons last year. Western Germany will probably, in the future, restrict fish imports to herring, since the German fishing fleet will again be in a position to provide and fill fresh fish requirements.

Fishing Fleet: Because of the age of the German fishing fleet, some 84 vessels are lying idle at present in the ports. Catches are not proportionate to the high costs of operating these old and small fishing vessels. Therefore, the German fisheries must aim at substituting these unprofitable fishing vessels by new ones. Orders have already been placed for 15 vessels of the new approved size.

At the end of 1949, the number of German fishing trawlers amounted to 225 and their average age reached 18.3 years. In 1939, Germany owned over 373 fishing trawlers with an average age of 12.7 years. The fleet of herring luggers consists of 115 vessels with an average age of 23.8 years. In 1939, these amounted to 168 with an average age of 18.9 years. The number of fish cutters has increased. In 1939, these amounted to 1,198 while today they amount to 1,414.

In order to operate these vessels on a profitable basis, it will be necessary to scrap the antiquated and unprofitable vessels.



THE FIRST TWO BUILDINGS ON THE LEFT ARE AUCTION HALLS LOCATED IN BREMERHAVEN, GERMANY. ALL FISH BROUGHT INTO THIS PORT IS LANDED AT ONE OF THESE TWO BUILDINGS.

Prices: German fishing vessels returning with their catches from the North Seas were being paid prices as low as $3/4$ to 1 cent^{1/} per pound just before Christmas and, even at these low prices, were unable to sell over 75 percent of their catches, the remainder of which had to be sold to the fish meal factories.

However, even in Hamburg, fish still retail at 6 cents^{1/} per pound and fish fillets at $9\frac{1}{2}$ to $10\frac{1}{2}$ cents^{1/} per pound.

^{1/} Converted on the basis of the postdevaluation rate of exchange of one Western Deutsche mark equals 23.8 cents U. S.

* * * * *

NEW FISH CANNING MACHINERY DEVELOPED: A mechanical fish canning process which reduces canning costs up to 35 percent has reportedly been developed by a Kiel firm the Karl Hartmann A. G., a March 2 American consular report from Bremerhaven states

The canning machinery used in the process takes open cans containing washed, salted, and cleaned fish, and cooks, dehydrates and oil-impregnates the fish in the cans. The cooking of the fish is done by infra-red rays rather than by steam or smoke. In addition, the machines seal, sterilize and label the cans.

The firm believes that the German fish-canning industry could compete in world markets in respect to price as well as quality if their new mechanized canning process is generally adopted.

SARDINE POPULATION INCREASING OFF GERMAN COAST: Measurements made by the Biologische Anstalt Helgoland in the summer of 1949 revealed an unusually dense concentration of sardine eggs and larvae in a 10-to 20-mile broad band along the German North Sea coast. North of the island of Borkum, sardine egg concentrations up to 3,885 eggs in the water column below one square meter of surface were found at the end of June. West of the Eiderstedt peninsula, up to 2,370 eggs per square meter were counted. All along the North Sea coast, egg densities were greater than 100 eggs per square meter, except opposite the Weser and Elbe mouths.

The former Zuider Zee and the Dollart have been known for many years to be sardine spawning areas. The maximum egg concentration ever measured in the former Zuider Zee was only 2,268 eggs per square meter in July 1912.

The studies of Biologische Anstalt show that large numbers of sardines must have spawned off the German coast between May 27 and July 31, 1949. During 1949, about 112 tons of sardines were caught by German coastal fishers, chiefly in fish weirs and fixed nets. No serious attempt was made to catch sardines by other methods. If the sardine appears off the German coast again in 1950 to spawn, it is likely that the German sardine catch will be increased through more intensive fishing for this fish.

U. S. TRAWLERS CHANGE HANDS: The three smallest trawlers of the 12 purchased by the United States Army for use in the German fisheries, the Pan Trades Andros, the Pacific (Margie and Pat), and the Josephine Ess, were returned by the charterers to the Army trustee during the winter 1949-50 because the charterers felt the vessels could not be operated profitably except during the late spring and summer.

Other charterers have been found for the vessels. No further turn-backs are anticipated at least until the end of the herring season.



Germany (Russian Zone)

NATIONALIZATION OF THE FISHING INDUSTRY: Nationalization of the fishing industry was begun in July 1949 by the Soviet Zone administration of Germany with the founding of the Vereinigung Volkseigener Betriebe Fischwirtschaft (Union of Fisheries Enterprises Belonging to the People, called VVB Fischwirtschaft for short), a January 26 American consular dispatch from Bremerhaven states.

At the present time, the VVB Fischwirtschaft is far from able to produce enough fish to satisfy the demands of the Russian Zone population.

Fishing Fleet: The VVB began with a fishing fleet of only 14 cutters, and now has 55 cutters.

Eleven are modern 79-foot vessels with motors of 120-150 h.p. capable of carrying 50 metric tons of fish. These cutters were built in Elmshorn in the British Zone and were delivered to the Soviet Zone under the East-West trade agreement.

The 44 cutters built in the Russian Zone are not so good, most being only 56 feet long with a 9-metric-ton capacity.

Eastern German shipyards have not been able to build larger vessels because of the lack of essential parts, especially motors. However, the East German yards are supposed to deliver enough cutters during 1950 to build the fleet up to 200 vessels, and some of these new cutters are to be of the 79-foot type. These cutters are designed to be able to fish in the North Sea, which the smaller boats cannot do.

The organization has its own repair yard at Gager on the Baltic.

In comparison to the expected 200-vessel VVB fleet, the private fishermen's association established before the war now has only about 120 old cutters at their

disposal, and experienced fishermen will have to accept employment on VVB vessels because of the shortage of privately-owned cutters.

Processing: In the fish processing field, the VVB Fischwirtschaft controls three processing plants and is building a fourth at Marienehe near Rostock. This fourth factory will have a capacity of 4,000 metric tons and will be the most modern in the Soviet Zone. The harbor at Marienehe is being enlarged, and eventually part of the cutter fleet will be stationed there. The organization also has leased several fish-processing plants on the island of Ruegen and along the coast of the mainland.

Distribution: The main distribution office of the VVB Fischwirtschaft is in Berlin. The shortage of refrigerated railway cars and insulated trucks has greatly limited the distribution of iced fish in the Soviet Zone. In the first 6 months of 1950, some 50 refrigerated railway cars are scheduled to be imported from Western Germany. Trucks with refrigerated cargo compartments also are to be put into operation soon, so that iced fish will increasingly displace salted fish in Eastern German stores. The VVB makes little use of private wholesalers or middlemen in its distribution system, and in time will no doubt be the sole dealer in fish in the Eastern Zone.

Effects of Nationalization: However, the fishing interests of Western Germany have not been pleased by the developments in the Soviet Zone. The loss to the West of the East German market may have been made permanent through the introduction of separate currencies in the two sectors. East Germany now is not only increasing its own fish-producing facilities but is building up trade connections with other European countries. Denmark, for example, is exporting fresh herring, plaice, and frozen mackerel fillets to Eastern Germany. Many West German fishermen are bartering their fish catches in Soviet Zone Baltic ports, especially Sassnitz and Stralsund. An average of 227 West German cutters are reported to land cargoes in the Russian Zone each month. Nets are the goods chiefly received in exchange for the fish.

Not only has the West German fishing industry been excluded from the Eastern Zone Market, but some physical assets of West German firms have been expropriated there. These have lost all their retail stores in Eastern Germany, which have been converted into "Volkseigene" stores.

The nationalization of the fishing industry in the Soviet Zone has thus brought losses, both actual and potential, to West German fishing interests.

DEVELOPMENT OF FISHING INDUSTRY IN SOVIET AND POLISH-OCCUPIED REGIONS: Introduction: Fish is one of the commodities which before 1939 was exported from Western Europe to Central and Eastern Europe. The great decrease in East-West trade has reduced trade in fish as well as other products. The German regions behind the Iron Curtain have been cut off from their normal sources of supply in Western Germany. The Western German fishing industry, now seeking to find additional markets, follows with great interest the efforts of the Soviet and Polish officials to develop alternate sources of supply behind the Iron Curtain.

Fishing Ports: Sassnitz on the island of Ruegen and Marienehe near Rostock are being developed into major fishing ports for the Russian Zone of Germany. Sassnitz is being developed not only as a fishing port but also militarily. The 24-meter cutters being built for Sassnitz fishery will be excellent military craft which could be used in the same way as the KFK cutters (70 feet long) were used by the German navy in World War II.

For the Polish-occupied regions, Swinemuende is being developed as a fisheries port. The Polish economic development plan provides large sums of money for the construction of quick-freezing and cold storage plants, for canning and other processing factories.

Fishing Fleet and Vessel Construction: In the development of the East German fisheries, fishing vessel construction has been emphasized at the expense of improvements in the fish distribution system. In the Russian Zone, 9 of the 11 shipyards employing 500 workers or more were occupied principally with fishing vessel construction.

A shipyard in Stralsund is building most of the drifters, which are the largest fishing vessels of any type built in an East German yard since the end of the war. They are 126 feet long, with a 25-foot beam, and a draft of 10 feet. A 300 h.p. motor gives the vessels a speed of about 9 knots. Loaded, the drifters displace 500 metric tons; empty, 400 tons. By utilizing sectional construction methods, the Stralsund shipyard plans to complete 100 drifters in 1950. Part of the engines for these vessels were either obtained from Western Germany before the counterblockade was imposed in the summer of 1948, or else were imported from the Czechoslovakian Skoda works or the Italian Fiat factory. In time, a plant in Magdeburg, now owned by a Soviet corporation, or one in Rostock are expected to be able to supply Diesel engines for the drifters. The cost of a drifter is approximately 1,000,000 East marks (about \$80,000). All drifters built pass into Russian ownership as reparations. The planned drifter construction for 1950 totals 158 vessels.

The next largest fishing vessel under construction is the seiner—34 are to be built in 1950, all for Russian ownership as reparations. Presumably the seiners are to be used in the Black Sea. The vessels are 85 feet long, with a beam of 20 feet and a draft of $7\frac{1}{2}$ feet. A 300 h.p. engine gives the seiners a speed of 10 knots. Loaded, the seiners displace 150 metric tons; empty, 135 tons. Two shipyards are building seiner sections which are assembled by other shipyards.

The third type of fishing vessel being built is the cutter. Some of the cutters are to be 79 feet long and the remainder 56 feet. The 79-foot cutters have a beam of 16 feet, a draft of 6 feet, a displacement of 45 tons, and a capacity of 10 tons. Motors of 80 to 100 h.p. give the smaller cutters a speed of 8 knots. One shipyard is to build 100 wooden-hulled cutters in 1950. Another shipyard in Berlin-Koepenick is building part-iron, part-wood cutters. The 1950 cutter construction calls for 159 vessels of both types, of which 87 have so far been allocated to the Sassnitz fishery. The remainder, as now planned, are to go to the Russians as reparations, and the planned development of the Sassnitz cutter fleet to 200 vessels in 1950 appears to be dependent upon the ability of the Eastern German regime to secure cutters from outside its territory.

Although the Russians are able to secure smaller fishing vessels from Eastern German yards free of cost as reparations, they have been forced to purchase larger fishing vessels in countries west of the Iron Curtain because of material shortages in Eastern Germany. A trawler of 1,213 gross registered metric tons was recently completed for the Soviet Union by a Belgian shipyard at Tamise. Five trawlers (700-gross-registered-tons) are now under construction for the Soviet Union in a shipyard at Uddevalla, Sweden. Vessels larger than cutters so far have not been used to supply fish to the East German population.

Outlook for Development of Fisheries: Despite the rapid construction of fishing vessels in the German territories behind the Iron Curtain, West German fishing interests still hope to be able to supply fish to Eastern Germany. The over-emphasis, apparently for military reasons, on vessel construction and the high proportion of vessels taken over by the Russians as reparations, has slowed up greatly the development of a balanced Eastern German fishing industry. The East German production goal for fish in 1950 is 50,000 metric tons, or about one-fourth of the real demand for fish. This demand is so great that Eastern Germany agreed to accept fish under the East-West trade agreement and some 125 metric tons of fish (processed weight) were delivered through legal channels to the Russian Zone in the months of October and November 1949. West German fishing interests hope that this amount is only the beginning.



Honduras

STATUS OF FISHING INDUSTRY: In the Honduran economy the fishing industry remained a negligible factor in 1949, according to a March 2 American consular economic report from Tegucigalpa.

The organization of two or three companies with the intention of exploiting the marginal seas, particularly in the Gulf of Fonseca, has shown no results. Interest had been expressed by some in fishing in the waters off the northeast coast of Honduras, and in establishing a base at Puerto Castilla or Trujillo, but nothing has come of these plans.

Except in some coastal areas, fish was practically non-existent in the Honduran diet. Only 93,126 pounds of dried and salted fish were exported, all to El Salvador, during the year ending June 30, 1949.



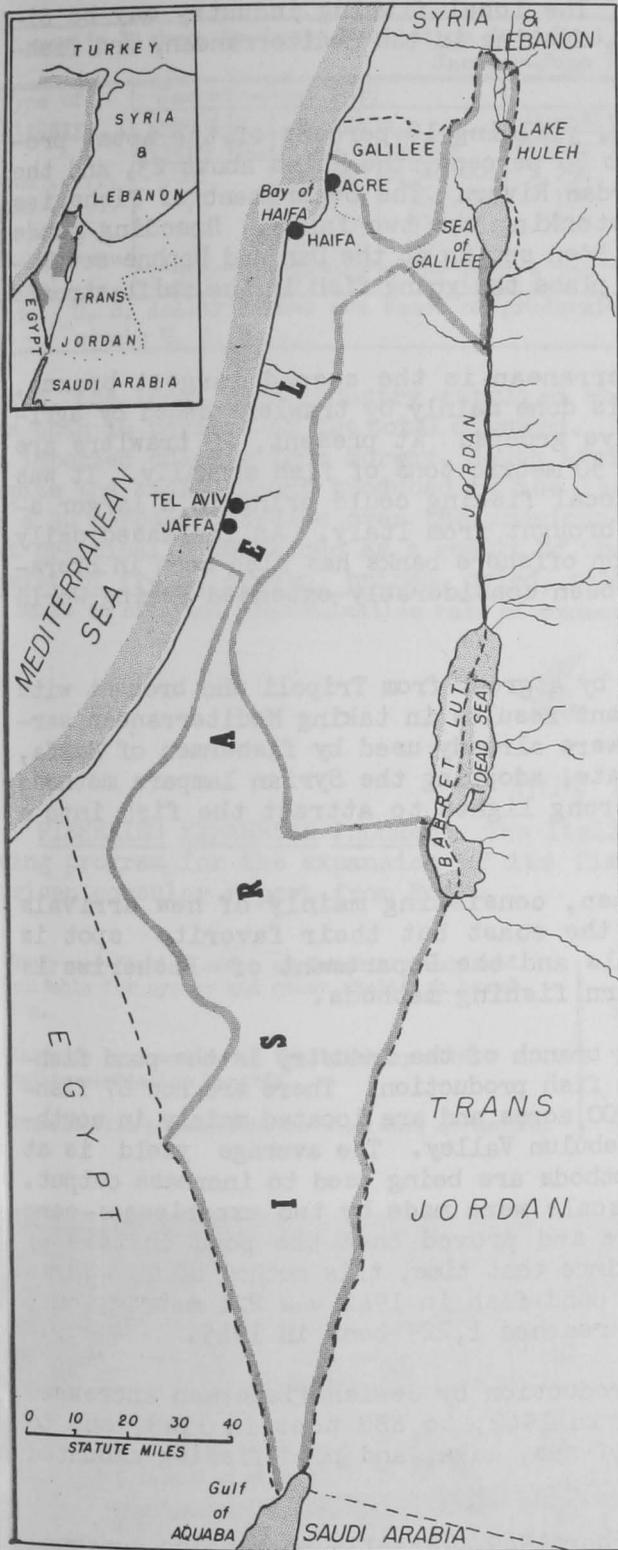
Israel

REVIEW OF THE FISHERIES: Expansion of Fisheries Planned: Plans for the expansion of all branches of the local fish production are being prepared by the Department of Fisheries of the Israel Government, states a February 3 American consular report from Tel-Aviv. It is expected that increased local production will make Israel more nearly self-sufficient.

The aim of the Department is to have by the end of 1952 about 5,000 fishermen employed in all branches of the industry, with an expected production of approximately 15,000 metric tons of fish, or about three-quarters of the country's consumption.

The cost of the program of the Department of Fisheries is estimated at about \$9,800,000,¹ which the Government and the industry would finance. It will require a total of 75 trawlers (against the present 20), 60 motorboats for surface fishing, 500 smaller rowboats and motorboats for close-to-the-shore fishing in the Mediterranean and in lakes, and 9,880 acres for fish ponds.

¹/Based on official postdevaluation rate of exchange of 1 Israel pound equals U.S.\$2.80.



ISRAEL (AREA ENCLOSED BY STIPPLE BORDER) WAS ORIGINALLY PART OF PALESTINE (BIGGER AREA ENCLOSED BY DOTTED LINE AND THE RIVER JORDAN).

The general belief is that large amounts of foreign currency would be saved and a considerable number of people employed in the new venture. This has been described by a Government spokesman as ambitious but not visionary.

Fishing Ports: One of the main reasons for Israel's small fishing industry has been lack of proper harbor facilities. The Department of Fisheries stated that the present construction of a harbor at Sdot Yam will greatly benefit the industry and increase the amount of locally-caught fish. Sdot Yam is expected to become the center of the fishing industry, while a smaller fishing harbor is being built at Mishmoret near Kfar Vitkin. The construction of a harbor south of Jaffa would also be of great value since fishing waters in the south are far richer than those in the north.

Exploratory Fishing: A Department of Fisheries mission, investigating fishing conditions in the waters of Elath (Gulf of Aquaba) since last September, reports that only a small number of edible fish has been found there and that commercial fishing would not be practical in that area at present. However, the Department is of the opinion that the best method for fishing in the tropical waters of Elath may not as yet have been discovered and, therefore, plans to keep the mission in Elath for several months longer.

Other experiments will include Danish fishing methods in deep-sea waters and English and American methods, using radar, depth-control devices, and assorted types of nets.

Another effort to increase the country's fish supply will be the Department's experimenting with the breeding of fresh-water fish in the sand-dune areas around Sdot Yam (Caesarea). Should these experiments become successful, large parts of the Negev would also open up for settlement and development.

Types of Fisheries: LAKE FISHING: The local fishing industry may be divided into three sections: lake fishing, fishing in the Mediterranean, and fish-pond culture.

The smallest branch is lake fishing, yielding 10 percent of the total production. The Sea of Galilee yields about 76 percent, the Huleh about 23, and the remaining one percent comes from the Jordan River. The Department of Fisheries has built a hatchery in Galilee and is stocking the two lakes. Breeding ponds for trout and other cold-water fish have been set up at the Dan and Daphne settlements in the north, and it is planned to place the young fish in the swift streams in the area, including Tel el Kady.

SEA FISHING: Fishing in the Mediterranean is the second largest branch, producing 18.5 percent of the total and is done mainly by trawlers owned by agricultural settlements and urban cooperative groups. At present, 20 trawlers are in operation and each accounts for about 50 metric tons of fish annually. It was realized that this important branch of local fishing could bring in a larger amount and, therefore, experts have been brought from Italy. An increased daily catch has already been noted. Trawling on offshore banks has also been in operation for some years and this method has been considerably extended during World War II.

Surface fishing has been introduced by a group from Tripoli who brought with them their equipment and have had excellent results in taking Mediterranean sardines. Their fishing methods, however, were already used by fishermen of Haifa, Acre, and Zeeb during the Palestine Mandate, adopting the Syrian lampara methods which involve fishing at night, using strong lights to attract the fish into a special type of net.

At present, small groups of fishermen, consisting mainly of new arrivals and discharged soldiers, fish all along the coast but their favorite spot is Haifa Bay. They bring in very small hauls and the Department of Fisheries is giving them special instructions in modern fishing methods.

POND FISHERY: The third and largest branch of the industry is the pond fishery which yields 71.5 percent of Israel's fish production. There are now 67 fishing farms which cover an area of some 4,700 acres and are located mainly in northern Galilee, the Beisan Valley, and the Zebulun Valley. The average yield is at present 1,369 pounds per acre, and new methods are being used to increase output. In 1933-34, experiments on a commercial scale were made by two experienced carp breeders from Europe at a place near Acre and proved that the pond culture of carp could be a profitable enterprise. Since that time, this method of fish farming made steady progress. Production of pond fish in 1942 was 221 metric tons, 416 metric tons in 1943, 703 in 1944 and reached 1,229 tons in 1945.

Production and Consumption: Fish production by Jewish fishermen increased from 235 metric tons in 1941 to 360 tons in 1942, to 682 tons in 1943, and to 1,245 tons in 1944. The 1947-48 output of sea, lake, and pond fishing amounted to 2,491 tons (see table).

During the Hebrew year ending September 1949, Israel's population consumed about 21,000 metric tons of fish, or approximately 48.5 pounds per person. The high consumption is attributed to the Government's austerity regime under which the consumption of only small quantities of meat is allowed. During the same

Israel's Fishery Products Production from Pond, Lake and Sea, 1940-41, 1947-48, and January-June 1949

Type of Fishery	January-June 1949			1947-48			1940-41	
	Quantity		Value	Quantity		Value	Quantity	Value
	Metric Ton	I£	U.S.\$	Metric Ton	I£	U.S.\$	Metric Ton	I£
Pond	801	394,045	1,588,001	2,254	1,032,452	4,160,782	39	5,837
Lake	177	89,924	362,394	125	28,849	116,261	72	4,140
Deep-sea ..	242	83,929	338,234	111	28,970	116,749	117	5,901
Inshore-sea	99	57,860	233,176	1	1,119	4,510	7	589
Total	1,319	625,758	2,521,805	2,491	1,091,390	4,398,302	235	16,467

Note: U. S. dollar values are based on predevaluation rate of exchange of 1 Israel pound equals U. S. \$4.03.

period, the local fish industry supplied about 3,500 metric tons, amounting to less than 16 percent of the total consumed. The remainder (valued at \$9,216,610^{2/7}) was imported chiefly from Norway, South Africa, the United Kingdom, and Denmark. Despite the small amount produced by the local industry during that year, there was a 30 percent increase over the previous year's production, but the increase went practically unnoticed as a result of the large influx of immigrants. Imports consist of fresh, frozen, brined, dried, salted, smoked, and canned fish.

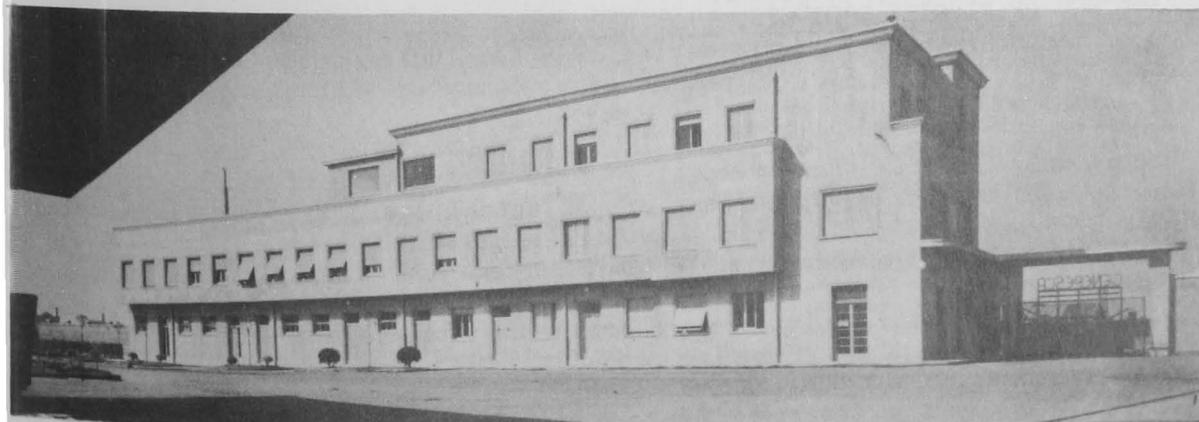
^{2/7} Based on official predevaluation rate of exchange of 1 Israel pound equals U.S. \$4.03.



Italy

FISHERIES EXPANSION PROGRAM: The Italian Government has announced the following program for the expansion of its fisheries, according to a February 11 American consular report from Rome:

- Study new fishing areas at Taranto considered suitable for oyster and other shellfish breeding.
- Increase consumption of shellfish by eliminating sanitation hazards.
- Augment fish populations in the lakes of central and southern Italy.
- 4. Utilization of fishery byproducts.
- 5. Development of preservation methods for fishery products (freezing and facilities for storage).
- 6. Biological studies of mackerel and other fish.



PLANT OF ITALIAN FISHERIES FIRM AT LIVORNO (LEGHORN), ITALY.

Japan

FISH MEAL PROCESSING INDUSTRY: About 5,800 fish reduction plants in Japan have an average production capacity of 100 metric tons of fish meal per plant annually. Only 202 of these plants can produce more than 4.4 metric tons in a 10-hour day. Only the few large, modern plants in Japan have a capacity for processing 35 to 50 metric tons of raw fish per day, the January 28 Weekly Summary of SCAP's Natural Resources Section reports.

The bulk of the plants are usually operated as home industries and are crude and primitive. Collection of statistics on the amount of raw material used or fish meal produced by these home plants is not possible, and only rough estimates are available. The usual equipment includes a cast iron pot, three to four feet in diameter and three feet deep, which is bedded in a sand beach with a fire hole beneath the pot. A wooden press also is required, with a few buckets and rice-straw mats. The fish are pressed in a hand-operated wooden press similar to that used for wine. The extracted stickwater and oil settle in a pan under the press where the oil is skimmed off and collected in buckets. The meal is spread on mats for sun-drying.

Sardines, herring, and flatfish are commonly used for oil and meal extraction in Japan when a glut occurs in the normal distribution channels. These fish are caught and processed during the entire year in various regions of Japan. The herring season in Hokkaido usually extends from March through May.

Japan has one floating fish-meal factory with a capacity of about 3,000 metric tons annually. Actual production during 1947 was only 80 metric tons, mainly owing to operating expenses and difficulties in obtaining raw material through ration channels.

Maximum annual production of fish meal in Japan from its approximately 5,800 processing plants is estimated to be 20,000 metric tons. In the United States during 1946, 184,657 short tons of fish meal were produced by probably less than 200 plants.

COASTAL WHALING CATCH, 1949: The coastal whaling catch for Japan during 1949 was 1,476 whales. Production of sperm oil, meat, blubber, bone meal, and other byproducts amounted to 21,853 metric tons. The whaling catch consisted of 208 fin, 755 sei, 499 sperm, and 14 blue whales.

LANDINGS OF FISHERY PRODUCTS, 1948 (REVISED): Estimated total Japanese production of marine fishery products during 1948 (excluding aquaculture and Antarctic whaling) totaled 2,512,729 metric tons, compared with the estimated 2,827,550 tons in 1947.

Taking only the data from official reports of landings of marine products (estimated to be between 85-95 percent of the actual total landed), the reported catch for 1948 was 2,135,824 metric tons. This was 213,074 tons more than the reported catch in 1947 (estimated to be 60-70 percent of the actual total landed).

During the past year, omissions and errors have been discovered in the tabulated data of 1948 landings of marine products, which were reported by the Natural Resources Section and published in Commercial Fisheries Review, May 1949, p. 43. The data given on the preceding page supersedes all previously published summaries of 1948 Japanese marine products landings.

Japanese Official Reported Landings of Marine Products by Species, 1948 (Revised)			
Species	Quantity	Species	Quantity
Fish:	Metric Tons	Fish (Continued):	Metric Tons
Herring	182,561	Sharks	93,350
Atka mackerel	52,396	Others	482,692
Sardine	317,278	Total	1,646,239
Bonito or skipjack	46,585	Other Marine Products:	
Tuna	31,503	Shellfish	72,154
Mackerel	80,068	Crustaceans	29,094
Horse mackerel	21,329	Cuttlefish and octopus	284,314
Flatfish	90,600	Sea cucumber	6,834
Sea bream	25,640	Coastal whales	1/45,575
Skipper	39,626	Seaweed	51,614
Cod and pollock	162,808	Total	489,585
Yellowtail	19,803	Grand Total	2,135,824
<p>1/ Coastal whaling production is computed by multiplying an average weight of 25 metric tons per whale by the number of whales caught. This change from the 40 metric tons previously used is based on data obtained from sample weighing studies of whales at coastal stations.</p>			

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FISHERIES RIGHTS REFORM: After two years of study, the Japanese Ministry of Agriculture and Forestry, assisted and advised by SCAP's Natural Resources Section, drafted a new fisheries law which was promulgated on December 15, 1949, which provides for a complete reformation of the fishing rights system. Final cancellation of the old rights and issuance of the new rights will be completed March 15, 1952; the two-year interval will allow for the preparation, planning, and actual cancellation and issuance of rights without disruption of fishing operations which are so vital to the food supply of Japan.

The following summarization of the progress of fishing rights reform in Japan was prepared by SCAP's Natural Resources Section and was issued as Information Bulletin No. 37, "Fisheries Rights Reform in Japan," by the Public Information Office, General Headquarters, (U. S.) Far East Command, on March 3, 1950.

FISHERIES RIGHTS REFORM IN JAPAN

The following summary of fisheries rights reform in Japan was prepared by officials of the Fisheries Division of SCAP's Natural Resources Section:

The pressure for additional sources of food and employment for the Japanese people has resulted in the development of property rights in aquatic resources to a far greater degree in Japan than in any other country.

The government favored this development because it provided a means of limiting the number of fishermen and at the same time relieving the government of the responsibility of arbitrating disputes between fishermen. The individual fisherman favored it because it gave him control of his particular fishing grounds.

Such rights, if properly governed, serve to protect the fishermen's sources of livelihood from exploitation by others, just as property rights on land protect the land owner. Consequently, property rights in fisheries tend to encourage management practices designed to provide the maximum sustained production of aquatic products.

Fishery rights in Japan are in the form of long-term franchises, with automatic renewal, issued by

the government and granting the holder the sole right to carry on specific-type fisheries in specified areas of waters. They have the local characteristics of real property rights and are subject to sale, rental, mortgage and other tests of private property.

Despite the desirable features of these property rights, they may be manipulated to the detriment of the bona fide fishermen if not governed by suitable legislation. The legislation governing the Japanese system of fisheries rights evolved from the feudal era and was not adapted to modern fishing techniques nor was it modified to meet the changing economic and social conditions.

This resulted in excessive concentration of fishing rights, absence ownership, exorbitant rental rates, forced membership in juridical bodies holding rights, bureaucratic control by government officials and other abuses similar to those found in agriculture.

The problem of fisheries rights and its relation to the over-all democratization of Japan was recognized by the Supreme Commander for the Allied Powers early in the Occupation. Natural Resources Section conducted a comprehensive investigation of the system of fisheries rights and licenses. This was necessary to provide

a basis for guidance and advice to the Japanese government and other interested groups.

The system of fisheries rights applies only to fisheries operated in coastal waters. Contrary to the public conception of the Japanese fishing industry, the bulk of Japanese marine production comes from coastal fisheries operated by small-scale fishermen, rather than from deep-sea operations.

Owing to the density of population and the importance of marine products in the inadequate Japanese diet, coastal fishing in Japan is the most intensified in the world. Because of this intensification the privilege of fishing is valuable and greatly desired.

High seas fisheries such as tuna and trawl fisheries are governed by licenses issued by the national government. In addition prefectural governments license certain inshore fisheries such as sardine purse-seine boats.

In January 1947 the Japanese government, recognizing the need for fisheries reform and encouraged by the Supreme Commander for the Allied Powers, began drafting legislation to accomplish this reform.

In the Allied Council Meetings of Feb. 5 and Feb. 19, 1947, all members agreed and recommended that the enactment of a law providing for the reformation of the fisheries system in Japan was desirable. Owing to the complexity of the problem and the many unique problems presented, the final draft of this legislation was not completed for submission to the Diet until April 1949.

During the intervening time, Natural Resources Section assisted and advised the Japanese Ministry of Agriculture and Forestry in the drafting of the legislation. The Fisheries Law was enacted by the Diet Nov. 29, 1949 and promulgated Dec. 15, 1949.

The Fisheries Law provides for complete reformation of the fishing rights system of Japan. Major provisions of the law are outlined below:

1. Cancellation of all existing fisheries rights and compensation to the holders of such rights for their loss with government bonds maturing over a 25-year period.

2. Improved utilization of fishing grounds by the issuance of rights, the contents and location of which are better adapted to current conditions and fishing techniques. The new law sets forth the priority and eligibility schedule for the issuance of rights. The schedule is designed not only to make "right ownership" available to the maximum number of fishermen, but also to give priority to those who are most experienced.

3. Authorization of three types of rights. All sub-leasing of these rights is prohibited, thereby preventing absentee ownership. The holders of rights pay a yearly fee to the Government in an amount sufficient to offset the cost of compensating former holders of the cancelled rights. These fees are to be discontinued after the compensation is paid in full. The three new rights are outlined below:

a. Common Fisheries Rights: Collection of uncultivated, more or less stationary marine life, and the operation of certain small-scale fisheries which are dependent on the placing of gear in specified locations. Common fisheries rights are in the form of ten-year franchises, with indefinite renewal privileges as long as the

holder meets the requirements set forth in the law.

b. Fixed Net Rights: Operation of fixed nets in waters 27 or more meters in depth, and of all fixed herring and salmon nets. Fixed net rights are in the form of five-year franchises, with provisions for review of the priority of all applicants and reissuance of the rights according to priority at the end of each five years.

c. Demarcated Rights: All aquaculture. The rights are in the form of five-year franchises, with automatic renewal, provided the holder complies with stipulations set forth in the law.

4. Authorization of two types of licenses:

a. Fisheries carried on in coastal waters for catching nonstationary marine life with gear not limited to specific locations.

b. Deep sea fisheries, such as tuna fisheries.

5. Establishment of fisheries adjustment committees. These committees are established in each fisheries region. A fisheries region, of which there will be about 150, is a coastal area where the same fishing practices and economic conditions exist. The committees are composed of ten members, seven of which are elected by the fishermen residing in the sea area, and the other three appointed by the governor of the respective prefectures.

A central committee appointed by the Ministry of Agriculture and Forestry, with the approval of the cabinet, is also established for the purpose of guiding and advising the national government in the administration of the law.

The final cancellation of old rights and issuance of new rights is scheduled to be completed March 15, 1952. The geographic boundaries of the sea areas are to be announced when the law becomes effective March 15, 1950. The Central Fisheries Adjustment Committee is to be appointed in April and the election of the Sea Areas Adjustment Committees is scheduled for August 1950.

Public notification of rights to be issued under the new law is to be made in January 1951. Between February and June 1951 allocation of the rights is scheduled to take place and the successful applicants are to be notified before July 1, 1951.

Actual cancellation of present rights and issuance of new rights will be accomplished in three phases. One transfer consisting principally of fixed nets operated in the summer season is scheduled to take place in August 1951. The second group, comprised of autumn-operated fixed nets, is to be transferred in December 1951. Transfer of the remainder of the rights is to be consummated in March 1952.

The two years allowed for the preparation, planning and actual cancellation and issuance of rights makes possible the accomplishment of the reform without disruption of fishing operations.

The Fisheries Law and Japan's experience with the problems involved in its drafting and enforcement may serve as a guide to other nations in meeting similar problems.



Korea

FOREIGN CAPITAL SOUGHT FOR DEVELOPMENT OF FISHERIES: The Korean Government in February expressed interest in having foreign capital assist in the development of all phases of the fisheries industry. According to official statements, contracts entered into under this proposal will guarantee fair treatment, moderate taxation, and relief from foreign currency controls in order to permit investors to recover their capital and to remit profits abroad, a March 11 American consular dispatch from Seoul states.

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List of Approved South Korean Import Items With Applicable Customs Duties and Sales Tax Rates		
Fishing Equipment	Customs Tariff Rate	Sales Tax Rate
Fishing boats	20 percent	No tax
Fish-Boat engines	10 "	" "
Fishing nets	25 "	" "
Canvas	40 "	" "

CUSTOMS TARIFF LAW: A new Customs Tariff Law was promulgated by South Korea on November 23, 1949, according to a March 4 American consular report from Seoul. Under this new law, which affects fishery products and supplies, raw materials are duty free and likewise

exempt from internal revenue sales taxes; luxury goods are subject to heavy duties; and materials for use in the production of finished goods are subject to an average duty of 10 to 20 percent.

Selected Group of Luxury Items with Applicable South Korean Customs Duties and Sales Tax Rates		
Foodstuffs	Customs Tariff Rate	Sales Tax Rate
All canned goods	40 percent	No tax
Fresh fish	35 "	" "

Supplies directly imported by the Korean Government under the Economic Cooperation Administration program are specifically exempted from customs duties.



Norway

HERRING FISHERIES, 1950: A near-record catch was established by the Norwegian herring fisheries for the 1950 season, a March 2 American consular dispatch from Oslo reports. The catch is estimated at 758,322 metric tons, valued at \$12,600,000. The previous record was established in 1948 with a catch of 820,260 tons.

This year's catch was so enormous that shore facilities were unable to handle all the fish, despite three-shift operations of 73 fishing factories, with the result that the Government authorities stopped sea fishing for the period February 11 to 19 inclusive to prevent further spoilage. This resultant loss of potential foreign exchange has prompted increased pressure for enlargement of the herring industry capacity.

A new herring oil and meal plant began operations at Stavanger immediately after the start of the present season. It is capable of processing approximately 600 short tons of herring per 24 hours.

Of this season's catch, the press reports that to date 27,270 metric tons have been sold directly for export, 40,500 tons for salting, 4,230 tons for canning, and 686,322 tons to herring oil factories. Only 1,800 tons have been sold for domestic consumption.

Next year's herring catch is expected to exceed the latest record. Plans call for a larger proportion of that catch to be used for herring meal production.

It is reported that the 1950 catch of brisling sardines will be packed for export in olive oil instead of sild-sardine oil. This may mean increased sales on the American market, where dissatisfaction occasionally has been expressed with the sild sardine oil. A price increase of 45 to 60 cents per case, however, is anticipated.

EXPERIMENTAL STORAGE SILOS FOR FRESH FISH: It is reported that the Fishery Directorate is constructing experimental storage silos in which fresh fish can be stored and preserved by harmless chemicals without affecting their quality. Thereafter, the fish may be processed in canneries, freezing plants, or converted into oil and meal. Preliminary tests are said to have given promising results.

EXPORTS OF FISHERY PRODUCTS: Increased foreign competition is reported to have reduced the export potential of Norwegian fish. With the exception of herring oil, the 1949 volume of exports of all types of fishery products was below that of 1948.

The export value of herring and other fresh fish in 1949 was \$65,386,750, and that of canned fish was \$20,956,000.

For 1950 the National Budget anticipates exports of \$66,092,000 of fresh fish and \$22,568,000 of canned fish.

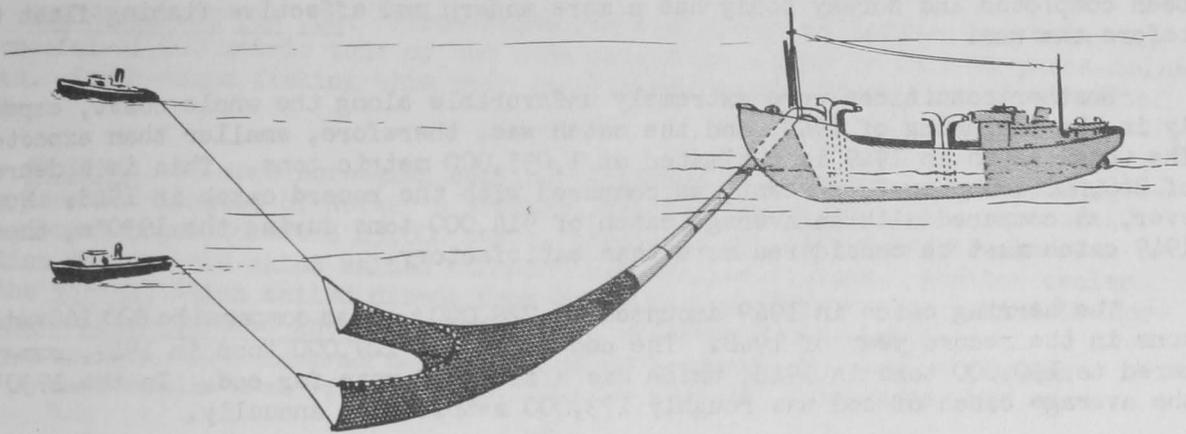
NET FLOATS AND BUOYS: All Norwegian requirements for fishing-net floats and buoys (from 35 to 40 thousand per year) are now being met by three Norwegian factories. The largest factory, at Kopervik, began operations in 1946 and present capacity is some 18,000 per year.

The floats and buoys are made of cotton cloth which has been impregnated with plastic for waterproofing. They have been very well received by Norwegian fishermen because they are so much lighter and easier to work with than foreign types and demand has been increasing steadily. It appears from newspaper accounts that the impregnation and inflation steps in manufacture have been successfully combined into one process. The production secret is the chemical which makes the plastic-impregnated cotton material retain its pliability after use in salt water.

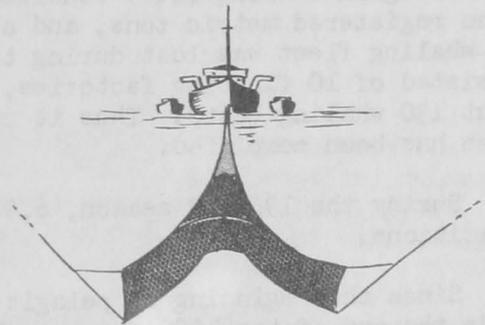
One type of float has a light at the top; current being supplied by either dry cells or storage batteries. The light is automatically extinguished when the floats are not in use, i.e., going out when they are placed on their sides or upside down. This type is said to be very successful.

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A VESSEL WHICH FISHERS AND LOADS CONTINUOUSLY: A project involving a vessel which fishes and loads continuously has just been laid before the Fishery Directorate by Thor Kringstad of Langevag near Alesund, Norway, according to the February 2 Fiskaren, a Norwegian fishery periodical. Mr. Kringstad has recently received world patents on his invention. It consists of a catching device which is adjustable in the water ahead of the vessel and is so constructed that the catch is carried continuously directly on board the vessel by means of a suction arrangement. Conveyors carry the catch to storage rooms and special unloading equipment along the vessel's sides. The vessel can operate on the fishing grounds, fishing continuously, while lighters or other transport vessels lie alongside and load, either while it is stopped or under way.



As may be noted from the sketch, the inventor envisions a trawl-like catching device with an extended hose-like pipe of canvas (reinforced by rust-free metal spirals) which is connected directly to the fishing vessel. Vacuum or suction equipment continuously draws the catch directly from the trawl into the vessel. The trawl may be towed by one or two vessels.



A VESSEL WITH A DEVICE WHICH FISHES AND LOADS CONTINUOUSLY.

The inventor maintains that his fishing method, applied to herring, for example, not only will produce greater catches than at present, but also will permit operations in weather which now hinders purse seiners and gill-netters. Large losses of gear, which occur when herring catches are especially great, also will be eliminated.

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REPORT ON THE REHABILITATION OF THE FISHERIES AND WHALING INDUSTRIES: Recovery after the devastation caused by the World War II is continuing at a rapid pace, and in the fisheries and whaling industries production and equipment have almost been brought up to prewar levels, according to a "Report on Economic Developments in Norway up to December 31, 1949," submitted by the Norwegian Government (Ministry of Commerce) in accordance with Article VII of the Agreement of July 3, 1948, concerning economic cooperation between the United States and Norway.

The Norwegian merchant fleet, and the whaling and fishing fleets are now completely restored.

Survey of Economic Developments in the Fisheries: During and for a period after the war, it was found necessary to ration fishing equipment. The supply of

fishing equipment, however, has gradually improved and rationing was finally abandoned on July 1, 1949. Restoration of the fishing fleet is now considered to have been completed and Norway today has a more modern and effective fishing fleet than before the war.

Weather conditions were extremely unfavorable along the whole coast, especially in the beginning of 1949, and the catch was, therefore, smaller than expected. The total catch in 1949 is estimated at 1,035,000 metric tons. This is a decrease of 260,000 tons, or 20 percent, as compared with the record catch in 1948. However, as compared with an average catch of 914,000 tons during the 1930's, the 1949 catch must be considered more than satisfactory.

The herring catch in 1949 amounted to 728,000 tons as compared to 820,260 metric tons in the record year of 1948. The cod catch was 129,000 tons in 1949, compared to 150,000 tons in 1948, which was also a bad year for cod. In the 1930's the average catch of cod was roughly 173,000 metric tons annually.

Survey of Economic Developments in the Whaling Industry: At the end of 1939 the Norwegian whaling fleet consisted of 13 floating factories totaling 155,000 gross registered metric tons, and about 100 whaling boats. About 50 percent of the whaling fleet was lost during the war. At the end of 1949, the whaling fleet consisted of 10 floating factories, totaling 142,000 gross registered tons, and about 130 whaling boats. Thus it can be said that the recovery of the whaling fleet has been completed.

During the 1948/49 season, 6,926 Norwegians were employed by foreign whaling expeditions.

Since the beginning of pelagic whaling on a large scale in the Antarctic, towards the end of the 1920's, more whales were caught than the existing stock could stand. Therefore, in recent years, both the length of the hunting season and the number of whales to be caught have been limited by international agreements. The 1948/49 season was limited to 3½ months, but the total number of 16,000 blue-whale units^{1/} allowed to be caught was reached before the end of the season. The Norwegian catch totaled 16,119 whales as against 15,656 in 1948. The total quantity of oil produced was 168,487 metric tons. Apart from this, there was a considerable production of byproducts, such as, 800 tons of salted whale livers, 59 tons of vitamin oil, 4,100 tons of whale-meat meal and 10 tons of meat extract.

The 1949/50 season also has been limited to 3½ months, but began on December 22, 1949, one week earlier than last year. The quota of 16,000 blue-whale units also has been maintained.

Exports to the United States: Exports of canned fish during 1949 to the United States were a good deal below the 1948 level (6,562 metric tons in 1949, compared with 9,697 tons in 1948). Exports of frozen fish fillets, on the other hand, increased from 228 metric tons in 1948 to 925 tons in 1949.

^{1/} 2 fin or 6 sei whales equal one blue-whale unit.

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FISH CANNING SCHOOL: The world's first fish canning school will soon be built in Stavanger, according to a March 25 report from the Norwegian Information Service.

It will give theoretical and practical instruction to men who wish to become foremen, superintendents, and managers of fish canneries.

PURSE-SEINING FOR COD: Purse-seine fishing of cod in Lofoten has been very successful—1,000 metric tons of cod were caught in 4 days by only 30 purse-seine boats. Purse-seine fishing this year is allowed for the first time on a limited scale.

SEALING: A large Norwegian sealing fleet has been sent to Newfoundland, among them the largest of Norway's sealers, the 700-ton Buroy with a crew of 40. This vessel hopes to catch 25,000 seals, producing oil to a value of almost a million dollars and skins valued at about 1.5 million dollars. Another sealer is the Norsel, which sailed direct from South Africa after having landed the Norwegian-British-Swedish Antarctic Expedition on Queen Maud's Land.

NOTE: Values for 1950 converted on the basis of the postdevaluation rate of exchange: one Norwegian krone equals 14 cents U.S.; for 1949: one krone equals 20.15 cents U.S.



Panama

NEW CORPORATION TO DEVELOP PANAMA'S FISHING INDUSTRY: A new corporation has been organized in Panama to develop that country's fishing industry, using modern methods and equipment, according to an announcement in the local press. It is understood that the new firm will catch and preserve fish, and also handle meat products, a March 20 American consular report from Panama states.

The corporation, which was organized on March 16, 1950, with an alleged initial capital investment of \$687,500, is backed by a number of prominent Panamanian businessmen.



Peru

PRODUCTION OF FISHERY PRODUCTS, 1949: Peru produced an estimated 58,468 metric tons of fishery products during 1949, according to the Division of Statistics, Direccion de Pesqueria y Caza, reports a March 16 report from the American Fisheries Mission in Peru. Of the total production, 22,958 metric tons were canned, with the bulk being exported.

Since there is very little local demand for fish meal, the bulk of Peru's production of 2,708.4 metric tons was exported. Most of the meal produced (2,166.7 tons) was bonito waste from canneries, and the balance of 541.7 tons was from whole fish of other species, such as, anchovetas, machetes, bonitos, sharks, cojinobas, etc., or represented 2,708 tons of fresh fish. Only a very small amount of fish oil was produced and exported.

Peru's Estimated Production of Fishery Products, 1949¹

Production of:	Fresh Basis		Processed Weight	
	Metric Tons	Metric Tons	Metric Tons	Cases
Fresh:				
Greater Lima	10,912	10,912	-	
Rest of Peru	16,368	16,368	-	
Salted ²	4,500	1,500	-	
Frozen ³	3,730	2,612	-	
Canned: ⁴	22,958	6,887	573,953	
Exported	20,662	6,199	516,560	
Peru	2,296	688	57,393	
Total ²	58,468	-	573,953	

- 1/Bonito are not weighed but sold by the dozen; average weight is estimated at 88 pounds per dozen fish.
- 2/All consumed in Peru, except 7 metric tons exported to Ecuador.
- 3/Frozen exports consisted of approximately 75 percent swordfish and 25 percent yellowfin tuna. Possibly 25 metric tons of swordfish were consumed in Peru.
- 4/Canned fish consisted of 90 percent bonito (*Sarda chilensis*) and 10 percent yellowfin tuna. Packed mostly solid, in vegetable oil, 7 oz. round can.
- 5/In addition, 2,708.4 metric tons of fish meal were exported.

Portugal

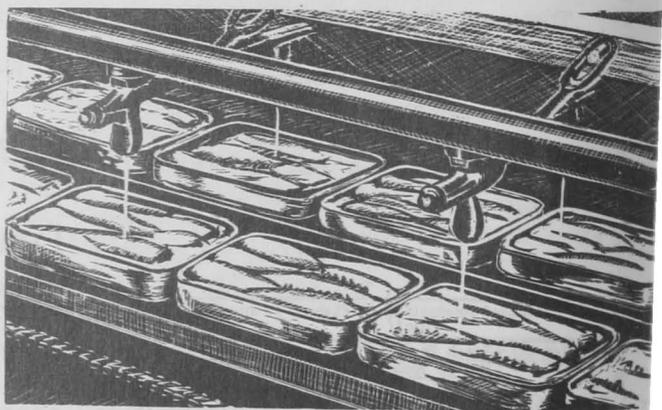
FISHERIES OF THE AZORES ARCHIPELAGO: Introduction: The Azores Archipelago consists of nine islands which represent an integral part of Portugal and not a colonial possession. It is divided politically and for purposes of administration into three districts: Ponta Delgada District (islands of Sao Miguel and Santa Maria), Angra District (islands of Terceira, Graciosa, and Sao Jorge), and the Horta District (islands of Faial, Pico, Flores, and Corvo). The chief occupations in the entire archipelago are farming and fishing.

Production: Statistics showing the total catch of fish in these islands are not available. However, the production for the Island of Sao Miguel indicates that 6,174,427 pounds of fish (valued at \$237,896) were caught during 1949 off the Island as compared to 5,614,028 pounds (valued at \$244,139) in 1948, a February 13 American Consular report from Ponta Delgada states.

Fish Canning Industry: Since the year 1929, the canned fish industry in the Azores has been steadily increasing. There are at present 5 large and 6 small canneries, the principal ones being located on the islands of Sao Miguel and Terceira. They employ about 60 motor launches, with a crew of some 1200 fishermen, and a number of other smaller boats. When the industry is at its height, the total number of persons employed is estimated at around 2,500, including fishermen, some of whom are occasionally recruited from Madeira Island for their superior skill over the Azorean fishermen.

Tuna is the principal fish used for canning, though "bonito" (a fish resembling a small tuna, the size of a good mackerel) is also largely used, as are mackerel, pilchards and sardines, whenever a large quantity is available.

Although this industry has not reached the normal production of prewar days, which was estimated at about 1,500 metric tons per annum, valued at roughly \$1,500,000, the production in 1949 was considered the best in recent years with the total estimated at 1,000 metric tons, valued at \$1,000,000; compared with the 1948 production of 500 metric tons, valued at \$500,000.



PORTUGUESE SARDINE ASSEMBLY LINE SHOWING OIL MACHINES AUTOMATICALLY ADDING OLIVE OIL TO FILL THE CANS.

The bulk of the Azorean products of canned fish is exported to the United States, Italy, France, Switzerland, Belgium, and Brazil (to a limited extent). The principal market is Italy, which is capable of absorbing the total production of the Azores. Since World War II, however, the United States was the leading consumer market up to 1949 when the Azorean product seems to have met serious competition from Japanese canned tuna and some Peruvian canned fish packed in cottonseed oil.

It is stated the larger production of canned fish in 1949 is possibly due to replenishing of the normal abundance of fish in Azorean waters which almost disappeared during the war on account of depth charges and target practice in the neighborhood of the Islands.

Foreign Trade: Canned fish attains second place in importance in the export trade of the Islands, with whale oil also a principal export item.

United States Imports From the Azores Archipelago, 1946-49 (Quantity and Value)

Commodity	Q U A N T I T Y				V A L U E			
	1949	1948	1947	1946	1949	1948	1947	1946
	Lbs.	Lbs.	Lbs.	Lbs.	U. S. \$	U. S. \$	U. S. \$	U. S. \$
Fish, canned (in oil)..	147,948	431,895	666,482	330,376	66,630	160,483	321,541	172,345
Fish, salted	2,940	2,618	820	-	260	167	85	-
Total	150,888	434,513	667,302	330,376	66,890	160,650	321,626	172,345

WHALING INDUSTRY OF THE AZORES ARCHIPELAGO: Whaling, which appears to have started some two centuries ago in the Azores, is one of the oldest industries which has contributed greatly to the economy of the Islands. It is now an established activity on almost every Island, especially Sao Miguel where there is one good modern plant for the production of whale oil, fertilizers, fish meal, and what is termed "ivory" from the teeth of the cachalot. With the exception of a limited quantity of fertilizer, and "ivory" utilized in the manufacture of souvenirs for the tourist trade, all other products are exported principally to foreign markets.

There are no recent figures indicating the production of whale oil in the Islands, but the scale of the industry can be judged from the production on the Island of Sao Miguel (see table).

Catch of Whales and Quantity and Value of Whales Produced on Sao Miguel, 1940-49

Year	Whales		Oil Produced Metric Tons	Est. Value U. S. \$
	No.			
1949	-		411	86,224
1948	-		574	120,420
1945	103		340	71,329
1944	76		254	53,287
1943	93		337	70,699
1942	64		270	56,643
1941	39		230	48,252
1940	84		295	61,888

During the war there was a great demand for whale oil in Europe, but exports were irregular and subject to strict allied control. For this reason, markets were procured in the United States, which proved profitable, and exports valued at \$35,649 and \$61,532 were made in 1946 and 1947, respectively. Due to unfavorable prices, no oil was exported in 1948, and in 1949, only 6,600 pounds of oil, valued at \$600, were exported from the Azores.

This industry which is considered important in the economy of the archipelago has been improved in recent years with the acquisition of machinery and motor launches.

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TO FISH FOR SARDINES OFF FRENCH MOROCCO: To recoup partially the losses due to the highly unsatisfactory local sardine catch during the season recently closed, Portuguese Government representatives are sponsoring the sending of trawlers to the area offshore from Agadir, French Morocco, where the catch is proving to be heavy and presumably steady, according to a February 28 dispatch from the American Embassy at Lisbon.

The Government is taking steps to acquire a fast ship with refrigeration facilities to permit the rushing of the catch from this area to Portuguese canneries.

Ryukyu Islands

REHABILITATION OF FISHERIES: Completion of construction of 35 fishing boats in the Ryukyus is planned by March 1950 in order to permit their utilization at the opening of seasonal operations, the February 11 Weekly Summary from SCAP's Natural Resources Section reports. The success of the fishing boat construction program should significantly increase aquatic production in 1950.

Indications are that the construction cost of the fishing boats will exceed the purchase price which Ryukyuan fishermen feel they can pay on the basis of prevailing costs of fishing and other economic considerations. The industry representatives are preparing a statement to justify their request for a purchase price below the construction cost. This request will be considered by proper authorities in establishing a reasonable price for the vessels consistent with the policy of expending United States relief funds for the rehabilitation of the Ryukyus.



Union of South Africa

YZERFONTEIN PROCESSING FACTORY IN OPERATION:^{1/} A South African fishery firm has started operating a large, modern canning and byproducts plant at Yzerfontein, 60 miles up the west coast of South Africa from Cape Town. The fishing harbor built in this area will be used as a base for pilchard and tuna fisheries to supply the canning and fish-reduction plant, according to the January 1950 issue of The South African Shipping News and Fishing Industry Review.

The reduction plant building is 120 ft. long and 38 ft. wide. A meal storage shed, 98 ft. long by 38 ft. wide, is also part of the reduction factory. A cannery, 360 ft. long by 50 ft. wide, is now being built. The plant will be equipped with a 150-metric-ton-an-hour capacity vacuum pump which pumps the fish from the boat hold to a dewatering elevator. All fish are elevated from the flume to the weighing house, where they are weighed by a continuous scale. They are then flumed into two 150-ton capacity concrete bins in the reduction building, or, later in the year, into the refrigerated tanks of the cannery.

When completed, the tuna cannery will have an intake capacity of 125 metric tons of raw fish a day. The plant will handle both pilchards and mackerel, packed in either oval or round cans as demand dictates. Tuna-canning equipment also will be installed.

In addition, there is a shark-liver oil factory with an intake capacity of two metric tons of raw livers a day.

Three American pilchard purse-seine boats were purchased by the company as models for future boat construction in South Africa. The largest of the three, North Cape, is 82 ft. long and has a cruising radius of 6,000 miles. The other two are smaller boats and will be used as short-range craft.

^{1/} See Commercial Fisheries Review, October 1949, p. 57



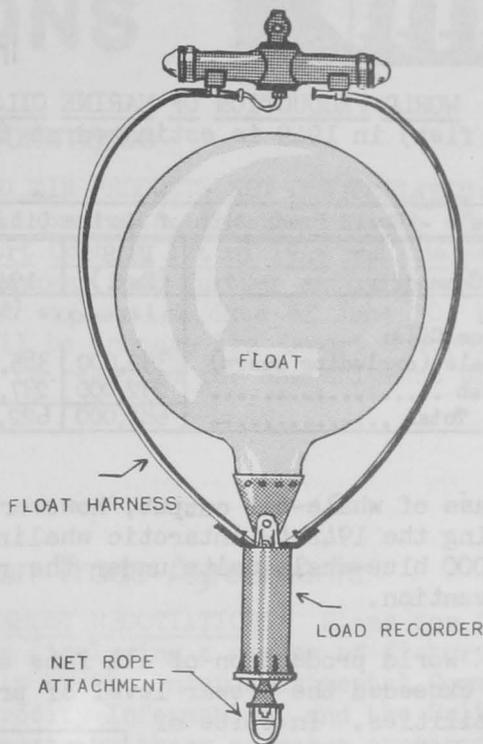
United Kingdom

NEW NET LOAD INDICATOR INVENTED: A net load indicator has been invented by Maurice Elliott, a British engineer from Beccles, Suffolk, according to the January 28 issue of the British periodical The Fishing News.

Over a year ago, the inventor decided to investigate the possibility of a device to enable herring drift-net fishermen to know when fish were in their gill nets. The first experiments were with a radio signalling device, but although this proved its worth, the question of cost and the advice of members of the industry and that of other interests in America decided the inventor to look for a much cheaper and simpler method of visual signalling. A simpler device has been perfected and tried out aboard the English drift-netter Dauntless Star. The skipper of this vessel is convinced that this new device will provide another valuable "eye" for fishermen to supplement their other scientific aids.

The system is operated by a device harnessed to an ordinary herring net float and "powered" by only a cycle lamp battery. After the nets are set, the indicator gives an intermittent light. When the nets begin to load with fish, the signal changes to a steady, upward beam, indicating that hauling should commence. For the experiments, only one indicator was used at the far end of the nets. However, it was always possible to see where the nets lay (which of itself is a very great advantage). The indicator proved itself one-hundred percent, according to reports. Nothing ever went wrong with the device, even in the worst weather. Better results are expected with a series of indicators along the line of nets to show heavy catches in various parts of them. The vital parts of the device are the subject of undisclosed patents.

It is claimed by the inventor that the net load indicator can be adapted to other methods of fishing besides drift-net fishing.



Venezuela

FISH CANNERY RESUMES OPERATIONS: A Venezuelan fish cannery located at Caiguire, which had ceased operations because of difficulties encountered in selling its product, has resumed operations at one-third capacity, a March 3 American consular dispatch from Caracas reports. The company is packing 700 cases of canned sardines daily, and employing 205 workers. It has found a market for some of its product in Columbia on an exchange agreement for rice.

The Venezuelan canners still believe they need protection against imported canned fish, according to an editorial which appeared in El Universal on March 1, 1950. The editorial stated that the Venezuelan consumer still preferred the imported fish.

International

WORLD PRODUCTION OF MARINE OILS, 1949: World production of marine oils (whale and fish) in 1949 is estimated at 684,000 tons, 10 percent above that of 1948,

Table 1 - World Production of Marine Oils, 1949 With Comparisons

Commodity	1949 (Est.)	1948	1947	Average 1935-39
..... (in short tons)				
Marine Oils:				
Whale (excluding sperm)	392,000	385,000	363,000	585,000
Fish	292,000	237,000	220,000	460,000
Total	684,000	622,000	583,000	1,045,000

though still well below prewar. This increase resulted principally from a substantial expansion in the production of fish oil, about one-fourth greater than in 1948, the March 6 Foreign Crops and Markets of the U. S. Department of Agriculture reports. The increase of whale-oil output, however, was small because the catch of baleen whales during the 1948-49 Antarctic whaling season again was limited to a maximum of 16,000 blue-whale units under the regulations of the 1946 International Whaling Convention.

World production of all fats and oils in 1949 was up 50 percent over 1948, and exceeded the prewar level of production for the first time since the end of hostilities. In spite of this, the world remains short of fats and oils compared with the per capita level of consumption before the war, and even shorter if inadequate prewar diets for many peoples are taken into account.

Table 2 - World Exports of Marine Oils, 1949 and Forecast for 1950 With Comparisons

Commodity	Forecast 1950	Estimate 1949	1948	Average 1935-39
..... (in short tons)				
Marine Oils:				
Whale (excluding sperm)	385,000	385,000	380,000	584,000
Fish	100,000	90,000	102,000	150,000
Total	485,000	475,000	482,000	734,000

Much of the increase in production of all fats and oils since prewar has occurred in the United States, and exports from the United States during 1949 made the largest single contribution to the alleviation of the world shortage. Indications are that United States exports will decline somewhat during 1950 because of the intensified shortage of dollar exchange in importing countries. As exportable surpluses of fats and oils accumulate in dollar areas, shortages will be intensified in certain non-dollar areas.

